

REMARKS

In the Office Action dated December 13, 2004, claims 1-5 and 10-13 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Fujimoto et al. (U.S. Patent No. 5,930,385). In addition, claims 6-9 and 14-21 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Fujimoto et al., Bar et al. (U.S. Patent No. 5,506,946) and/or Lund (U.S. Patent No. 5,650,858). In response, Applicant has amended the independent claims 1 and 10 to more clearly distinguish the claimed invention from the cited references. In view of the amendments to the claims and the following remarks, Applicant respectfully requests the allowance of the pending claims 1-21.

A. Patentability of Amended Independent Claims 1 and 10

The independent claims 1 and 10 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Fujimoto et al. In response, Applicant has amended the independent claims 1 and 10 to more clearly distinguish the claimed invention from the cited references. As amended, the independent claim 1 recites a method of enhancing an input digital image having color features comprising:

*"converting said input digital image to a binary image of first and second type pixels such that pixels of said input digital image that define said color features are substantially converted to said first type pixels of said binary image;
changing the resolution of said binary image with respect to the number of pixels to derive a modified binary image; and
selectively inserting colors into pixels of said modified binary image to produce an output digital image having modified color features that differ in resolution with said color features of said input digital image."*

As explained below, the recited "*changing*" element of the amended independent claim 1 is not disclosed in Fujimoto et al. As such, Applicant respectfully asserts that the amended independent claim 1 is not anticipated by Fujimoto et al., and thus, should be allowed.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir.

1987); MPEP §2131. The Office Action alleges that Fujimoto et al. discloses the element of "*changing the resolution of said binary image to derive a modified binary image*," as recited in the original claim 1. In support of this assertion, the Office Action states on page 3 that "column 11 lines 8-9 disclose converting the image input into a color image of different resolution." However, Applicant respectfully asserts that the element of "*changing the resolution of said binary image with respect to the number of pixels to derive a modified binary image*" (emphasis added), as recited in the amended claim 1, is not disclosed in Fujimoto et al.

The cited reference of Fujimoto et al. discloses "an apparatus and method for image conversion capable of distinguishing regions in an input document which are adjacent to each other and have a little difference in value in reducing the number of colors in a document or in converting it into a monochrome document, and moreover, capable of producing a document with fine appearance which can be easily re-colored," as described in column 2, lines 30-38. The apparatus and method of Fujimoto et al. DOES NOT involve "*changing the resolution of said binary image with respect to the number of pixels to derive a modified binary image*," as recited in the amended claim 1. The lines 8-9 in column 11 of Fujimoto et al., which was cited in the Office Action in support of the assertion that Fujimoto et al. discloses the recited "*changing*" element of the original claim 1, does not involve changing the resolution of an image with respect to the number of pixels.

The lines 8-9 in column 11 of Fujimoto et al. is part of a paragraph that begins at line 65 in column 10, which states:

"In the embodiment described above, the object of the process is a color image of N-color as the input image and regions of the image is distinguished based on colors so as to determine the region colors for the distinguished regions. However the present invention can be applied to a monochrome image having N-degradation such as a monochrome photographic image. In such a case, the apparatus can be constructed so that the regions are distinguished in accordance with density and converted into a **monochrome image of a predetermined number of gradations which is less than N or a color image of a predetermined number of colors which are less than N.**" (emphasis added)

The above paragraph describes converting an input image into "a monochrome image of a predetermined number of gradations" or "a color image of a predetermined

number of colors," neither of which involves changing the resolution of an image with respect to the number of pixels. Therefore, Applicant respectfully asserts that the cited reference of Fujimoto et al. does not disclose the element of "*changing the resolution of said binary image with respect to the number of pixels to derive a modified binary image*," as recited in the amended claim 1. Consequently, the amended independent claim 1 cannot be anticipated by Fujimoto et al., and thus, should be allowed.

The amended independent claim 10 recites a similar limitation as the "*changing*" element of the amended independent claim 1. Thus, the above remarks are also applicable to the amended independent claim 10. As such, Applicant respectfully asserts that the independent claim 10 is also not anticipated by the cited reference of Fujimoto et al., and thus, should be allowed.

B. Patentability of Independent Claim 16

The independent claim 16 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Fujimoto et al. and Lund. The Office Action correctly states on page 11 that Fujimoto et al. "does not disclose scaling the binary image to enhance binary features." However, the Office Action states on page 12 that "it would have been obvious to one of ordinary skill in the art to have used the scaling of Lund because (column 3 line 65 - column 4 line 1) the effect is improved print quality at higher resolution, and placed processing overhead borne by the printer and not the host computer of its user."

In rejecting the independent claim 16, the Examiner has failed to establish a *prima facie* case of obviousness, as described below. Therefore, Applicant respectfully asserts that the independent claim 16 cannot be deemed to be obvious over Fujimoto et al. and Lund, and thus, the independent claim 16 should be allowed.

To establish a *prima facie* case of obviousness, the following three basic criteria must be met, as set forth in MPEP 2143:

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of

ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations."

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Thus, to establish a *prima facie* case of obviousness for the independent claim 16, there must be some suggestion or motivation to combine the teachings of Fujimoto et al. and Lund to derive the claimed invention, as recited in claim 16.

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The apparatus and method of Fujimoto et al. addresses the issue of making a copy of a color document by a monochrome copying machine or printing a color image edited with a color CRT by the monochrome printer, which may result in an output document with indistinguishable regions that originally differed in hue or chroma, as described in column 1, lines 16-28. The alleged motivations of improved print quality at higher resolution and placing the processing overhead on the printer and not the host computer of its user to combine the teachings of Fujimoto et al. and Lund, as asserted in the Office Action, are the described advantages of the method and system of Lund. Applicant fails to see how these advantages would motivate a person of ordinary skill in the art to use the scaling of Lund in the apparatus and method Fujimoto et al. when higher resolution would probably further exacerbate the issue being addressed by Fujimoto et al.

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As stated in MPEP 2142 on page 2100-128, "[t]he initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. 'To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.' *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)." By merely stating the described advantages of Lund, the Office Action has failed to provide a valid motivation to combine the teachings of Fujimoto et al. and Lund. The Examiner is requested to cite art supporting the assertion made in the Office Action. Alternatively, if the Examiner is aware of facts within his/her personal knowledge that provide the requisite factual basis and establishes the requisite motivation to support the assertion, the Examiner is explicitly requested herein to

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provide an affidavit in accordance with 37 C.F.R. § 1.104(d)(2). Otherwise,
Applicant respectfully requests the allowance of the independent claim 16.

C. Patentability of Dependent Claim 2-9, 11-15 and 17-21

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Each of the dependent claims 2-9, 11-15 and 17-21 depends on one of the
independent claims 1, 10 and 16. As such, these dependent claims include all the
limitations of their respective base claims. Therefore, Applicant submits that these
dependent claims are allowable for at least the same reasons as their respective base
10 claims.

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Applicant respectfully requests reconsideration of the claims in view of the
claim amendments and the remarks made herein. A notice of allowance is earnestly
solicited.

Respectfully submitted,
Clayton Brian Atkins

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By: Thomas H. Ham
Thomas H. Ham
Registration No. 43,654
Telephone: (925) 249-1300